

CSP12

## **THE EFFECT OF FOLIAR APPLICATION OF LIQUID ORGANIC FERTILIZER ON RED CLOVER FORAGE YIELD**

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Proper mineral nutrition of red clover, especially on acid soils is one of the preconditions for the realization of the maximum yield potential. The aim was to analyze the impact of foliar application of liquid organic fertilizer on forage and hay yield of red clover, in terms of dense planting. The field experiment with varieties of red clover (K-39 - diploid and Amos - tetraploid) and fertilizing treatments (control and Bioplant flora) was set up in Čačak on the alluvium soil type, with acid reaction (pH<sub>H2O</sub> 4.8). The trial was set up a randomized block design with three replications, with plot size of 5m<sup>2</sup> (5x1m). Sowing was performed on 20 cm row spacing and seed rate of 18 kg ha<sup>-1</sup>. Foliar application of fertilizer (Bioplant flora, Plant DOO, Russia, at a concentration of 0.4%, with the water and a water rate of 250 l ha<sup>-1</sup>) was performed in the first and second growth during the second year of cultivation, once at the beginning of intensive growth and the second time two weeks after. The second growth in the second year of cultivation has been used for the production of seeds. In the third year, foliar fertilization has not been performed, but only possible effect of fertilizers from the previous year was accompanied. The crop was grown without irrigation. The varieties were harvested at the budding stage. Foliar application of liquid fertilizer has affected significantly the increase of green forage yield at the tetraploid variety Amos, but only in the first growth of the second year of cultivation, when the application of fertilizers was conducted. It can be connected with the positive effect of biostimulants and nutrients that the fertilizer contains, on growth and stem elongation of this variety, which normally has higher potential for yield of forage. However, in the third year of production, there was no significant differences in the green forage and hay yield between the control and the variant which was fertilized in the previous year. This indicates that foliar fertilization did not have a prolonged effect in the next year's growth.

Key Words: Red Clover, Bioplant Flora, Forage